## SEQUENCE LISTING

<110> Susan M. Freier

<120> ANTISENSE MODULATION OF INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN 5 EXPRESSION

<130> RTS-0253

<160> 43

<210> 1

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 1

tccgtcatcg ctcctcaggg

20

<210> 2

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Antisense Oligonucleotide

<400> 2

atgcattctg ccccaagga

20

<210> 3

<211> 1612

<212> DNA <213> Homo sapiens <220> <220> <221> CDS <222> (44)...(862) <400> 3 ctctcctgcc ccaccccgag gtaaaggggg cgactaagag aag atg gtg ttg ctc 55 Met Val Leu Leu 1 ace geg gtc etc etg etg etg gee gee tat geg ggg eeg gee eag age 103 Thr Ala Val Leu Leu Leu Ala Ala Tyr Ala Gly Pro Ala Gln Ser 5 10 15 20 ctg ggc tcc ttc gtg cac tgc gag ccc tgc gac gag aaa gcc ctc tcc 151 Leu Gly Ser Phe Val His Cys Glu Pro Cys Asp Glu Lys Ala Leu Ser 25 30 35 atg tgc ccc ccc agc ccc ctg ggc tgc gag ctg gtc aag gag ccg ggc 199 Met Cys Pro Pro Ser Pro Leu Gly Cys Glu Leu Val Lys Glu Pro Gly 40 45 50 tgc ggc tgc tgc atg acc tgc gcc ctg gcc gag ggg cag tcg tgc ggc 247 Cys Gly Cys Cys Met Thr Cys Ala Leu Ala Glu Gly Gln Ser Cys Gly 55 65 gtc tac acc gag cgc tgc gcc cag ggg ctg cgc tgc ctc ccc cgg cag 295 Val Tyr Thr Glu Arg Cys Ala Gln Gly Leu Arg Cys Leu Pro Arg Gln 70 75 80 gac gag gag aag ccg ctg cac gcc ctg ctg cac ggc cgc ggg gtt tgc 343 Asp Glu Glu Lys Pro Leu His Ala Leu Leu His Gly Arg Gly Val Cys 85 90 95 ctc aac gaa aag agc tac cgc gag caa gtc aag atc gag aga gac tcc 391 Leu Asn Glu Lys Ser Tyr Arg Glu Gln Val Lys Ile Glu Arg Asp Ser 105 110 115 cgt gag cac gag gag ccc acc tct gag atg gcc gag gag acc tac 439

Arg Glu His Glu Glu Pro Thr Thr Ser Glu Met Ala Glu Glu Thr Tyr

			120					125					130			
	ccc Pro	_			~ ~					_				_	_	487
-	gaa Glu 150															535
	gtc Val		~ -	_												583
	gag Glu	_	_	_	-			_			_	_	_			631
	gct Ala		_	_				_	_		_	_			_	679
_	gtg Val		_			_	_	-					-	-	-	727
_	tgc Cys 230				_		_	_	_			_		_		775
_	aag Lys			•	•	_			_			_	~	000	_	823
	cag Gln	_				_	_	_		-		tga	tgc	gtcc	ccc	872
ccc	aacc	ttt (	ccct	cacc	cc c	tecc	accc	c ca	gccc	cgac	tcca	agcca	agc ·	gcct	ccctcc	932
acc	ccag	gac (	gcca	ctca	tt t	catc	tcat	t taa	aggga	aaaa	ata	tata	tct ·	atct	atttga	992
gga	aact	gag g	gacc	tagg	aa t	ctcta	agcaa	a gg	gctca	aact	tcga	aaaa	tgg ·	caaca	aacaga	1052

the state of the s

The state of the s

gatgcaaaaa	gctaaaaaga	caccccccc	ctttaaatgg	ttttctttt	gaggcaagtt	1112
ggatgaacag	agaagggaag	agaggaagaa	cgagaggaag	agaagggaag	gaagtgtttg	1172
tgtagaagag	agagaaagac	gaatagagtt	aggaaaagga	agacaagcag	gtgggcagga	1232
aggacatgca	ccgagaccag	gcaggggccc	aactttcacg	tccagccctg	gcctggggtc	1292
gggagaggtg	ggcgctagaa	gatgcagccc	aggatgtggc	aatcaatgac	actattgggg	1352
tttcccagga	tggattggtc	agggggagaa	aggaaaaggc	aaaacactcc	aggacetete	1412
ccggatctgt	ctcctcctct	agccagcagt	atggacagct	ggacccctga	acttcctctc	1472
ctcttacctg	ggcagagtgt	tgtctctccc	caaatttata	aaaactaaaa	tgcattccat	1532
tcctctgaaa	gcaaaacaaa	ttcataattg	agtgatatta	aatagagagg	ttttcggaag	1592
cagatetgtg	aatatgaaat					1612

19

<210> 4

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 4

ccaaacacac ccgcatctc

<210> 5

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR Primer

<400> 5

-5-	PATENT
	22
е	
ccgc	26
е	
	19
e	
	20
	e ccgc

20

-6-RTS-0253 <212> DNA <213> Artificial Sequence <220> <223> PCR Probe <400> 9 caagetteec gtteteagee <210> 10 <211> 1722 <212> DNA <213> Homo sapiens <220> <220> <221> CDS <222> (752)...(1570) <400> 10

ggggaaaaga gctaggaaag agctgcaaag cagtgtgggc tttttccctt tttttgctcc 60 120 ttttcattac ccctcctccg ttttcaccct tctccggact tcgcgtagaa cctgcgaatt tcgaagagga ggtggcaaag tgggagaaaa gaggtgttag ggtttggggt ttttttgttt 180 ttgtttttgt tttttaattt cttgatttca acattttctc ccaccctctc ggctgcagcc 240 aacgcctctt acctgttctg cggcgccgcg caccgctggc agctgagggt tagaaagcgg 300 ggtgtatttt agattttaag caaaaatttt aaagataaat ccatttttct ctcccacccc 360 caacgccatc tccactgcat ccgatctcat tatttcggtg gttgcttggg ggtgaacaat 420 tttgtggctt tttttcccct ataattctga cccgctcagg cttgagggtt tctccggcct 480 540 ccgctcactg cgtgcacctg gcgctgccct gcttcccca acctgttgca aggctttaat tettgeaact gggaeetget egeaggeace eeageeetee acetetetet acatttttge 660 aagtgtctgg gggagggcac ctgctctacc tgccagaaat tttaaaacaa aaacaaaaac

aaaaaaatct ccgggggccc tcttggcccc tttatccctg cactctcgct ctcctgcccc	720
accccgaggt aaagggggcg actaagagaa g atg gtg ttg ctc acc gcg gtc  Met Val Leu Leu Thr Ala Val  1 5	772
ctc ctg ctg ctg gcc gcc tat gcg ggg ccg gcc cag agc ctg ggc tcc Leu Leu Leu Leu Ala Ala Tyr Ala Gly Pro Ala Gln Ser Leu Gly Ser 10 15 20	820
ttc gtg cac tgc gag ccc tgc gac gag aaa gcc ctc tcc atg tgc ccc Phe Val His Cys Glu Pro Cys Asp Glu Lys Ala Leu Ser Met Cys Pro 25 30 35	868
ccc agc ccc ctg ggc tgc gag ctg gtc aag gag ccg ggc tgc ggc tgcPro Ser Pro Leu Gly Cys Glu Leu Val Lys Glu Pro Gly Cys Gly Cys40455055	916
tgc atg acc tgc gcc ctg gcc gag ggg cag tcg tgc ggc gtc tac acc Cys Met Thr Cys Ala Leu Ala Glu Gly Gln Ser Cys Gly Val Tyr Thr 60 65 70	964
gag cgc tgc gcc cag ggg ctg cgc tgc ctc ccc cgg cag gac gag gag Glu Arg Cys Ala Gln Gly Leu Arg Cys Leu Pro Arg Gln Asp Glu Glu 75 80 85	1012
aag ccg ctg cac gcc ctg ctg cac ggc cgc ggg gtt tgc ctc aac gaa Lys Pro Leu His Ala Leu Leu His Gly Arg Gly Val Cys Leu Asn Glu 90 95 100	1060
aag agc tac cgc gag caa gtc aag atc gag aga gac tcc cgt gag cac Lys Ser Tyr Arg Glu Gln Val Lys Ile Glu Arg Asp Ser Arg Glu His 105 110 115	1108
gag gag ccc acc acc tct gag atg gcc gag gag acc tac tcc ccc aag Glu Glu Pro Thr Thr Ser Glu Met Ala Glu Glu Thr Tyr Ser Pro Lys 120 125 130 135	1156
atc ttc cgg ccc aaa cac acc cgc atc tcc gag ctg aag gct gaa gca Ile Phe Arg Pro Lys His Thr Arg Ile Ser Glu Leu Lys Ala Glu Ala 140 145 150	1204
gtg aag aag gac cgc aga aag aag ctg acc cag tcc aag ttt gtc ggg	1252

Val	Lys	Lys	Asp	Arg	Arg	Lys	Lys	Leu	Thr	Gln	Ser	Lys	Phe	Val	Gly	
			155					160				•	165		-	
gga	gcc	gag	aac	act	gcc	cac	ccc	cgg	atc	atc	tct	gca	cct	gag	atq	1300
Gly	Ala	Glu	Asn	Thr	Ala	His	Pro	Arg	Ile	Ile	Ser	Ala	Pro	Glu	Met	
		170					175					180				
aga	cag	gag	tct	gag	cag	ggc	ccc	tgc	cgc	aga	cac	atg	gag	gct	tcc	1348
Arg	Gln	Glu	Ser	Glu	Gln	Gly	Pro	Cys	Arg	Arg	His	Met	Glu	Ala	Ser	
	185					190					195					
ctg	cag	gag	ctc	aaa	gcc	agc	cca	cgc	atg	gtg	ccc	cgt	gct	gtg	tac	1396
Leu	Gln	Glu	Leu	Lys	Ala	Ser	Pro	Arg	Met	Val	Pro	Arg	Ala	Val	Tyr	
200					205					210					215	
ctg	CCC	aat	tgt	gac	cgc	aaa	gga	ttc	tac	aag	aga	aag	cag	tgc	aaa	1444
Leu	Pro	Asn	Cys	Asp	Arg	Lys	Gly	Phe	Tyr	Lys	Arg	Lys	Gln	Cys	Lys	
				220					225					230		
cct	tcc	cgt	ggc	cgc	aag	cgt	ggc	atc	tgc	tgg	tgc	gtg	gac	aag	tac	1492
Pro	Ser	Arg	Gly	Arg	Lys	Arg	Gly	Ile	Cys	Trp	Cys	Val	Asp	Lys	Tyr	
			235					240					245			
ggg	atg	aag	ctg	cca	ggc	atg	gag	tac	gtt	gac	ggg	gac	ttt	cag	tgc	1540
Gly	Met	Lys	Leu	Pro	Gly	Met	Glu	Tyr	Val	Asp	Gly	Asp	Phe	Gln	Cys	
		250					255					260				
cac	acc	ttc	gac	agc	agc	aac	gtt	gag	tga	tgcg	gtccc	ccc c	ccaa	acct	t	1590
His	Thr	Phe	Asp	Ser	Ser	Asn	Val	Glu								
	265					270										
ccct	caco	ccc c	ctccc	cacco	cc ca	agcco	ccgac	c tcc	agco	cagc	gcct	ccct	cc a	accco	caggac	1650
gcca	actca	att t	cato	ctcat	t ta	aggg	gaaaa	a ata	ıtata	atct	atct	attt	ga g	ggaaa	aaaaa	1710
aaaa	aaaaaaaaa aa										1722					

<210> 11

<211> 21000

<212> DNA

<213> Homo sapiens

<220>

<400> 11 ggagggaagg ggagacgaag ttactctcct cattgtgttc accetgctcc gaagaactct 60 gtettecact ggececteca ectectecce atteteggta gececageet gtececettg 120 180 cccctttctt acattccggg gggaggaggg cgctgttcag aggggaggag ggcgctgttc agggagegaa ggggageece ettgtgteta gaaggeetet eeceaceece acceegtgtg 240 agtttgtact gcaaagctcc ttggcatcct tgcctgagtt gggtgttggg aagctcaaat 300 tgcagctaca aactggctgg cagccagggg ccggctattt aaaagcgcct gctctcccgg 360 agccccgtag tctctttgga aacttctgca ggggaaaaga gctaggaaag agctgcaaag 420 cagtgtgggc tttttccctt ttttgctcct tttcattacc cctcctccgt tttcaccctt 480 ctccggactt cgcgtagaac ctgcgaattt cgaagaggag gtggcaaagt gggagaaaag 540 aggtgttagg gtttggggtt tttttgtttt tgtttttgtt ttttaatttc ttgatttcaa 600 cattttctcc caccetctcg gctgcagcca acgectctta cctgttctgc ggcgccgcgc 660 accgctggca gctgagggtt agaaagcggg gtgtatttta gattttaagc aaaaatttta 720 aagataaatc catttttctc tcccaccccc aacgccatct ccactgcatc cgatctcatt atttcggtgg ttgcttgggg gtgaacaatt ttgtggcttt ttttccccta taattctgac 840 ccgctcaggc ttgagggttt ctccggcctc cgctcactgc gtgcacctgg cgctgccctg 900 cttcccccaa cctgttgcaa ggctttaatt cttgcaactg ggacctgctc gcaggcaccc 960 cagocotoca cotototota cattitigoa agigtotiggi ggagggoaco igototacot 1020 gccagaaatt ttaaaacaaa aacaaaaaca aaaaaatctc cgggggccct cttggcccct ttatccctgc actctcgctc tcctgcccca ccccgaggta aagggggcga ctaagagaag 1140 atggtgttgc tcaccgcggt cctcctgctg ctggccgcct atgcggggcc ggcccagagc 1200 ctgggctcct tcgtgcactg cgagccctgc gacgagaaag ccctctccat gtgcccccc 1260

agccccctgg gctgcgagct ggtcaaggag ccgggctgcg gctgctgcat gacctgcgcc 1320 ctccccggc aggacgagga gaagccgctg cacgccctgc tgcacggccg cggggtttgc 1440 ctcaacgaaa agagctaccg cgagcaagtc aagatcggtg agcgcgctca gtgtgccagt 1500 cagttacgcg gcgcacgggc gggggacacg agaccggctg ggcccgcgcg ctttgcgcag 1560 caagtggctt cgagctgggg tgcagctcgg gagtagtcgg ggagggtcct tgcacccgg 1620 aattggagcc ctggaggatc ctgctacccg ggggaactgt ctagccgagt ctatcccagc 1680 tttcgctctt tctccttcct cctacccaca cgttgcccgc cccctccccc tactctgtcc gaatactgat tctgagctct tattcggtca caaggtccaa atcccctggt accctatcta 1800 cagtctgaaa gagtgtatgt tacattatca actccctcct ccaccccct cgcgccccgc 1860 ataggttttt ttctgaactt ggaaaaaaaa tctcttttgt taaaatatta ttttaattgc 1920 ggcctggaga gagaggcatt acctatcttc tgagctaatt ccacctttgt ccctcttggc ccctccaccc ccgtgcctcc agacgtttct atccctccac ccctacacac acaccacaaa 2040 caccccacat ccttggtagc taatgccttt cgggtgggag ccctgaagcc cctcccatgt 2100 gcataaccat tgctttttat tgaagatgat tgcctgtggt agatggtaaa acatatttaa ctgcaaaatg acttttattt tatcccagga agggaaaaaa atactttagg agtgcggggg 2220 tgcggggtgg gggtggggaa gagtagaaag gaagggtttg gtattctgtg cctggtgttc 2280 gtttctgaat ctaattcctt ttccccctct ccaattcaga ttttacctag gatgaaaggt 2340 ggacataggg ctgggaggca aaaggggatg tgagattcag agctttcaac ttcctcgcct atgcagattc ctggcaccac caccacctcc acccccgccc cgcaattcct ccctccgcaa 2460 tcccccacc ccgccctccc caatctctta aaccagatca caagtgggtg tggattaagt 2520 gcatgagggg ccctggaaac gcagaatgca aaattcaggg ggcggagaca gaaaagccac 2580

gcactgggag cctcgcctcc gcttgccccg cccccgggtt gcgccgcccc caaattctcg gcgccaggag tctagggttg aaatgattga cacagctact tgttcaatca gaacagttct 2700 2760 aaagttaaat aaactacata aaagtctggg ttctaagacg tcaaactggc tattgattct 2820 ctccaaaagg ggttaaaact tggctaaaca atgtttattt ggcgtagttt agttacggag 2880 acagtttagt tacgggggca atccccttct ccctccctgt ccctttccgt tactcacgag 2940 caccetaaca tgagttttet gaagtgcaaa tttcagtcac tatagtgcag gagaggagtg egteegeget tgceaggagg ceggagaget teetgtgtte ageeteagte eeegeaaace 3060 ctgcagggtt tgagtggcgc aggggccagc ccctctagct ttgcaagagg tagtcgatct 3120 ccaaacctgc aaaaagtcga tctttttgca ggttgcagcc tgcaaaaaga ggaaaagggg 3180 aggatgtgca ggctctggga accccagaga ccggcttgtg agattatttt tattaagatc 3240 cacttttcaa aggeggteet geeegeette atettggggg atgtggattt ggaaaageet 3300 agcggagaag gaaaacatta attgatttcc cggcttggga gccaccgccc tgggtaacaa 3360 tccagtcaca ccgaaagaac gtaaggtgtc actcagccgc atcctggctc cacttattat 3420 ttaccaagcg tgtagtgtga tgtggctagt gtgaagggtg tacacgcaga gcgcacgcgc 3480 gegeaattge taggegagea eggagggege ateacacaca cacacacaca cacacacaca 3540 cacacacaca cacgacactt cagtcccaag caagatcccc tgtagaattc cctgccgccc cttgctcaac ccccaccttc tgagtgcctt tgggccaacc cgaagccgcc tcttctaccc 3660 gececetece cageactect etecgaetee acceegeega aggeaggtge eeggeegget 3720 gctgttgcgg gttggcggcg ctccaccgct gctggtgccg acatcttctt cccgaacaga tgggatggga gtgggcgctc ctggaaaggg cgttttagcc ggacaaccac tgggcgggtc 3840 cccaaaaagt tggagatggt gtagagaccg ttcttaagga gagagaaatg gacagagaga 3900

gggagagtge cettttggte etttagecaa aatteetget teecaacaca ectectacet ccctcctctc ccccaccccc gccaaaatct gagcttgcag atatggattt gccccctccc 4020 tecegeagtt geageataca cacacacaca cacacacaca cacacacac cacacacacg 4080 acatattata tctatataat tatatattgt atatatggta tatactatat tatatatatt 4140 tatatgtaac caaacatgta gaacccaaaa aaggtgcatt tctggaatca gaaatgggga 4200 gcagaagaga gtgaggtggc aggcagccaa agcctctggg agggaaagga gagggcggag 4260 gagagggtgt tttgctaggc tgttgctgag caactggaga gggagtgggc ccgagagcag 4320 ggtgctgaga gcgagcctgg ctctgcattt cattctggcc agttcaggag cagagataga 4380 tacggaaaaa agaatgtgtg tgaggctgga gggagatgaa agacgggagt tatttgatgg 4440 gcaaagctca gtaaatagcg gtgagtggag ggagtcaagg aagtactggg tttgctttcg ggcatttttg gtggggaatg aggtttgatg ggctggtccc cagcatagat accggggttc 4560 gggtaggtct cctctgtgct ggtgagacat tcagtttaag atgtagggag ccgtgggttc 4620 tggctttcgg ttctgtcatt aagaaatgag acaccgtggg acaaaaaata ggcttctgga 4680 aaagaaagca aaagcattac ctaaataaaa gtgaattcag cctttgcttc tttgaggggt 4740 ttggcctcca tcaccctggc ttcaactcca agcctggtct aaaatgccat gttgaagtcg 4800 agttccagag ttaggtttat tggccaaatt tatgtctggg ttgagcaaga tcatggaaaa 4860 ctgaaggage caaatteett teecaceege acceettee tetgaaacaa gtetttgaga 4920 ggatggcgtg ccctgagcca accaaaacgg gagttgggaa aacgagatgg ggctttaact 4980 ggacttttet egecacetee geecacegee eeegeeceeg eeeaceeege eeeceeteee 5040 ccacctttct gctgtgtcag ctcagactgg aagaacaagc agagttagcc ctagtgagag 5160 egacettete catecacece eegaceeec aceceaacte taaggeatee eetgaggget 5220

tgagttttaa gtcagagcag ctgtgagtta gtcccggggc ttgggctgga tttgagcagg caggtgggcc tgcagctgca gagggtggac cagcctgacc ctaggagcca gaggtcatcg 5340 tgagggttac agcaaagggc atgggagcag gaattccctg cagaagccct ggcccctta 5400 atggagcgaa gaagccagcg ggaagggaag gtaatacttg tctaaagttt ctactttgta 5460 cctgagcaat gcctatgaaa cttttaagat atttagtgtg tggaaaataa aactctggag 5520 aagagatcac cacactccag acccactaca tccagaaact ggaagaagat cataaagagc 5580 aggtaccaac caggggccag agcagaaggg aagagggtgg gagaatggct gcgttgagtc 5640 aagcaggcga tttggagggg tttgtttagt tttacatttg ctttttctct acagttggtc 5700 caaaagctgc aattcccaga gactatcctt aaattgcaat caggacatgt tattcaaaac 5760 agtaagactg attacacatt gattacatac ttgcaaaaat aaataataaa ataaacaagg 5820 atggcagtgt aggettetae teceeteece caataceagt gaaateeee eetttattt ccagtttcat ttctttccat aaattctgtt atgatgtcat ttctctctct ctctcttt ttaaaaaata taaatccaga ggagtgactg aaaatctctg tgaggaggag aggttatatt 6000 cccaccttgg ccactatgct gttggtttag agcacctaac caggttagtt agttagtgcc 6060 tggccactca gcttagctca gtcctagtgt ctctccagga attgtctggg tattggccaa 6120 ataatgttaa agctggaagg aacccatagc catcatcaca gtcaaggtcc tagttttaga 6180 atgaggatac tgaggccctg agtgggaagt cacttgccca agatgtggca gcagggttag 6240 agacagacaa ggggctggga ctcagctctt tcccgcaggg gctccagcac tgcattcagc catteetgge tttetegeta gteactgggg eteatgeetg gaeetggget aacetgeagt 6360 aaggcctttg gcaaacactg ccagatgcta tcactccatg acataagaac ccataatctg 6420 aaggcactct gttttagggg cagtaggaaa aggagtgaag cggccccaaa gtggagaggg 6480 ccacactctc ttattttcac actcacttct gtcccttttt ctacacagtc ttgcatacaa 6540

gcctggctta ggctagtggt ttggtcagag aaagaggacc aagagggtgt gaaggagggg 6600 tgttcacccc agctttcagg tccatgcgcc aaacctcatt ttctacatga caggaagctc 6660 teetgatgtg gagaggeagg caggeetgge tgeetetgag etgtgeageg geetgtagte 6720 ttgaagaaca tggtgcagaa gtggcccgct tccaacagca cagtcctcac gtggtgccaa 6780 cagaaagcag agatcgagag agggtgtggt tggatggggt gagtgcagta actaggaagt 6840 tctgcatccg aaggagagaa ggaaaaccat ataccaccaa agctgataag gaagagagca 6900 tgagggcccc ctggctttct ttcataggca gatgtgtctc agatctttca gcaggagagg 6960 agagatgtgc ttccagaggg cagctgggga cttctggttg tgctgcagga agtgctgaga 7020 cccattctaa tacatcctgg aggccgtggc agctcctcct tctgggatgc ttaggaagga 7080 ggcagataag ataggcccct ttttccggta agtcagacct gccaggtgaa ctataggaac 7140 attttaaacg aactcagtta tctcatgttt gatccctcaa cctaaaccat caggcccctt 7200 tccctggcct aaaataaggt cccactgaat ctgcactcag agccaggcct cagatgacct ctgctgattc tctgagttgt ttaatgtggg ttccagttat cccgaactgg gactgcgaca 7320 cccctctgtc acctcagcca ggatgactct tcttccagat catttagaac agcacttcca 7380 attgaaacat aatacaagcc atatttgtca tttttaattt tctggtagcc acatcttttt taaaaaaggta aaaaaaacag ggaaattaat tgtaataata cattttaact gaatatatcc 7500 aaaatateet tteaceacae geteaaaata aaacaattat aatgagatat tttacattet 7560 ttccttcata tttagccttt gaaatccggt gttttttaca cttacagctc atctcaattc agacactaaa ttttcattgg aaatacttga tctgtattta gatttcataa aatttacagt 7680 tgaaaaagca gagtcacata cctgaggcat tccaaacata ctttaaaatc tttccaataa 7740 7800 ttttaaaatg tggttcctca gttccccggg ccacatttca gatgttccgt atgtatctgc 7860

acatggttaa	ı tggctaccag	caaacccctc	: tctcacctga	a gaaggcaact	gctgtcccca	7920
ctctttcctt	: ttgctcccaa	agactcaaaa	aaggggagto	: tcagctttcc	, ttgacagaca	7980
gggctccctt	gtttggtccc	tagcagagcc	: tgggcacctt	cttcggggcc	: tcaggagaga	8040
agcgtaaacc	ctacttcctc	cctgccgccc	ccttctggtc	c atgcagaact	ttggggggat	8100
gtggctgtgg	ctggcaatgt	tctgaactgg	ctgtgatggg	, tcatgatggg	aaagtggcca	8160
ggagaaaagc	tgcccagtgc	ttcctccaga	ggctgctccc	: cacctatccc	cccaccatta	8220
ccttctcatt	tggggaatgt	atgaggaaca	gacagacact	: tctactaagc	atgctccccc	8280
ttccccaact	ccaaaagaag	cttggctgga	gattctcago	cagggacttg	tgcatcagtg	8340
tgtatttcct	atgtgtacag	ttatcgccag	ctgcttccca	gggaccaaga	aatgtgaacc	8400
agagtcacaa	ccccaaatcc	tagtttggca	tcagaaaaca	acaaggagcc	tctctttacc	8460
tctggtccct	ggacagtggg	gcagatgtaa	gggggacctc	agccccttac	tctgtgaggt	8520
gtcaccttcc	cacctgtggc	atctacactg	tggagggcgg	tgggccccct	tttctctata	8580
tatcttcagg	gaaggaggct	aagtgccctt	aacgcagcat	gaaggaatgg	ggttaggcag	8640
aggaaggact	cccaggggga	gctctctaag	tggagacggg	tccggagagc	acctgtgcca	8700
agtcctcacc	tggtgttggc	caacagaccc	ccagagacaa	aggtcgagcc	aacactttct	8760
ggcagacctt	cctgcagtcc	aaggagcctc	agatcttgtg	gtctacaagt	aggcgtctgt	8820
caaccaggtg	tcacagcaac	caaattttta	gttgatgatt	cgaactaggg	aggtggtagg	8880
aaacagcact	acaaaggcag	agacctgttc	tgagagtgaa	ttagcatgca	tcaccctgat	8940
taatcctcag	aatataatgg	agaaggggcc	attgccatcc	tccccataac	acaggtgaga	9000
aaactgaatt	ggaaagagga	agaagaaagt	aaggtctttg	ggaggctgag	gtgggtggat	9060
cacgagctca	agagatcaag	accatcctgg	gcgtggtgct	gcatgccttt	agtcccagct	9120
actcaagagg	ctgaggcagg	agaatcattt	gaacctggga	ggagagggtt	gcagtgagcc	9180

9240 aaaaaaaaag aaaggtcaaa gtaaatctgt accaaggttt gtttatttat ttattttag 9300 aaacaaggtc tcactctgtc acccaggctg gagtgcagtg gcacaatcat ggctcactgc 9360 agcctccaac tcctgggttc aagccatcct cccttctcag actccccatt gctaggacta 9420 taggtgcaca ctgccacgcc cggctaatat ttcattttat gtagagatgg ggtcttgctg 9480 tgttgccaaa gctgcatcaa ggtttactga gctattgtca acagcttcat cttcctccca 9540 gaaaggacag ctgaaggttt agggtggcac agtttgctgt acctattcag tagtggagct 9600 gggatttgaa cccaggtggt ctggttcctg attctgaatg gttatccact atactacatg 9660 gtgtctgtat ttctctggta aggatagaga tatattccca gcttggccag ctttgctgtt 9720 ggtttagagt acctaaccat gctatttctc ccggcctaaa atggggtagg ggggctcagc 9780 tgggtacacc tatagccctc atcatccagt cagtagttct ctaagtctgc tcaactcccc tccggggtct tcctcctggc tttcctccat tcttacagct gctttttagg atgacagctt 9900 tgggtttttt ttttttctta aaaggttagt gctcatttcc tcctcagccc ataattcagg 9960 ttaaaaagaa cccggaacat gcatgcctat ttctgacgat caagtaaaaa caaaaacaaa 10020 caaacaaaaa acaaaaacaa aaaaaaatgt cttctgagag agactggcgc caggcagctg 10080 ctggtcagag atgggatggg taggaaaaga aatgatgttg ccacttccct ggaagtgtcc 10140 acagcacett ecceetgeea caaccaetgt ggeetttete ettetgeaaa tgeacacaca 10200 caagcgcaga aaagccattt gacatccaca gctgggaaac agacttcaag agactgagac 10260 atgtcttaca ttttttcaaa cagtgaacag ccaatccctc atgcttccac cagccttgtg 10320 ttgtagggag gggctggtgg ctgcaagttg gctagggacc tagggttggc aagggaggag 10380 ggggactgca gaacattcta gactgggcct cagtattttc atccataccc aggcacaagt 10440 cagtgccgtc aggccagcac tgaccaggac tttctgcaat gatggaagcg ttgcaggtct 10500

gcaatgtcca tatgtggcca cgaagtcctt gaaatatggc tagagtgact gaggagctga 10560 atttttcatt ttatttaata tttatttaaa tagccacatt ggctagtggc taccatatta 10620 aatatatact ttttttttt tttttgtcac actattgccc aggggggaat gtagtggcac 10680 gatcttggct cactgcaacc tccgcctccc aggttcaagt gattctcctg cctcagcttc 10740 ccgagcagct gggattacag gcacacacca ccatgcctgg ctgatttttt atttttagta 10800 gagacagggt tttaccatgt tggccaggct ggtctcgaac tcctgacctt gtgatccaac 10860 ctccttggcc tcccaaagtg ctgggattac aggcgtgagc caccatgcct ggcctaagta 10920 gtacattaat atatagtagc cttaggccaa agagaagccc agtgaatcca ggagcacccc 10980 tgctgtttct cacacccatg acgctcatct gtctgcttcc ctgtgccctg cggcagggtt 11040 atcttgctcc agggcaggag catggatgag ataacctccc aaggcatgca ctgggctcta 11100 agccccagct tatattacag aaatacttcc agacctactt ctctttgcct cttgggcaga 11160 tttacacatc tctccattta aaggttattt attgaatact atatgctggt gagacaaaga 11220 gaaatgacaa agctctgccc gtaagaagtt ggctgtttaa attccacagg ggggactaga 11280 atgaaaccca gaacaaattc agctcccttt ttcattcttt gtagagagat tctaggcgtc 11340 ctcatcttat cttctgtcta gaaaaggaga tgggagaatc tccccaggtc tgggtggcct 11400 ggcaaagccc gacactcttc ctggactgtg aatttcaagg atgcctctgt ttcttcgatt 11460 tttgtaagct aaggcacaat atctgggtca cctagttttc tcttacaatt gattattagg 11520 tcaagtgaga tagagtgata aactaacacc agcccaggaa caggctgtta atagcaccgg 11580 ggtgtggcta agaggtccgg gggcgggggg tttagatttt aggcaggcag gtctcctgga 11640 tccatccatt gctgtgacca gcaagcaagg tggagtcaga acccttcaga ctctactgga 11700 agagaacagc cgtggcaaaa gggcaggttt ggagaaagtg gttgagcttg ggcagggtac 11760 atgcgttgtg caattgtgca gcatggagta tttctcaccc taagatgcct ctgggtctgt 11820

agcagctggg cttgcatcat gacactctct gtgtttgcca ggacatagag gatggtgcaa 11880 tcctcaaaca cgtgttcatg ttaccatggg gagaggctga tgtactgtgt gtgcctctgt 11940 ggatgctgct gcactggggt gtatggggaa ctccttatga atgaaagagg actgagttgg 12000 ccacccaaat gtggcagggg ccagaggcat tggagagcca gtggggaagga ctggaggtat 12060 tatatagaag ccagagattt agatcccacc ccaaaggtaa atactgtatc cagataatat 12120 tatcatcatc ccctccctta gtcattgaat agggttatga aggtaaggtc tggcctccat 12180 agatcccagc aggagaaatg gatgctgagc attccacatt tcccatcctc tgcaaaaacc 12240 teteagaaca geateteatg ggeggggaag tetggaatat gtetetette etteetggat 12300 cattttccag ttggaggtta cagaaacagc agaatgccat gcacaaacaa gccctgttcc 12360 cetetecete acetgeette acteteceae acatgggtte teteegggee tegettgttt 12420 gtctccctga ctctttaaat atatcctgca gacacacaaa cagaaggaag ggatttattt 12480 gaatgattat tgcagaagta ggagagggag gcacccaaat tccagattta tttttcttt 12540 gagacagggt ctcactctgt cccccaggct agagtgcagt ggagctatca aagtggagca 12600 atcatggete accteageet cageeteaac etecaatete caaceteeta eetecaacet 12660 cccaccttcc gggctcaagc aatcctccgg tctcagcctc ctgagtttct cagactagag 12720 gcgcacgcct ctatgcccag ctaatttttg tgtttttttt gtagagacgg ggtttcacta 12780 tgttgtccag gctggtctcg aactcctggg ctcaggcaat ccactcacct tggcctccca 12840 aagtgctggg attagagata tgagccaccg ctctcaattc caaattccag attttaaaaa 12900 cacttccagg ccgggcttgg tggctcacgc ctgtaatccc agctctttgg gaggccaagg 12960 cgggcggatc acgaggtcag gagatcgaga ccatcctggc taacacggtg aaaccccatc 13020 tctactaaaa atacaaaaaa ttagccgggc atggtggcgg gcgcctgtag tcccagctac 13080 tcgggaggat gaggcaggag aatggcgtaa acccaggagg cggagcttac agtgagccga 13140

-18-

gatcgcgcca ctgcactcca gcctgggcga cagaaggaga ctctgtctca aaaaaaaaa 13200 acaaaaaacg cttccagtcc ctagaagtgt gcccatgctg tgtgggtgtc agtctcccac 13260 gccctctgct ggccacatgg agatattgac ctgtttgtca aacaggttcc agagcagact 13320 gttgagttet tttgetgtte aegtgeagaa caatetteae eaggaagtee teeegggtat 13380 cctgcctaga tcccttctgc aacctcagtt cattttctct tgatgaaata gctccagagt 13440 agccagtcta cttgttcctt cttgttttat ctaaaacgca aagccttcca caattgaaag 13500 cctatttatg actcagccac agagcagctg agtcgggctg gctgcttctg gcactcagct 13560 ccagtcttac tttccagccc tttaatctcc atggctctgc cctggctccc ctccaagttt 13620 ccgctgtctc tctggagcct acaggtgacc acaagaccct gattagtatc ttcgacactg 13680 gactctgctg ctgcctaagg aataggtccc atggggttaa gtggcaccag aaaccaggag 13740 gcacatcaaa atgttaagcc tgctcttcag aagcagccaa aaagcttgca aagctgggga 13800 aggtgtgccc tcaggagact tgccttgggg aggctgggaa aaggagagag tttgcaaaag 13860 cattttgagt tccttaaatg aagagagata caagaatcta cattttgtat gccagtatca 13920 tggttgcttg gccccggggc agtacttgaa cactttcaaa gaaaagagta agagaggtca 13980 aaataaattt accccaaggt ttatcaaacc gttgtcaaca gccccatccc cctcccagaa 14040 agggtgactc aaggttaagg acagcccaca gcacttctta gaaaaagtcc caaaaggtga 14100 aaggtcttga gaagagctgt tgagggaagg ctgtgggcca ccatgcttct gtgtccccca 14160 aggccaaaga gagaataagc taaaatgaca gctggaaaag ggcaccctct gaccaaatgg 14220 acagageete eeccaacagg tageeaggg aggatggaat ggeaceeca ttteagatgt 14280 ccttaagaac tagagagata gatgcttatt tctgcttgga cacaggggga tggactaaat 14340 ggcctacgga aaggattcca ggaactgcta caccagccac aggagagaag ccagcttccc 14400 aggetgtete ecettgaaga ggtgacaatg tgttggetet ecaggecagg etggggeage 14460

 $\verb|ccactgaagg|| \verb|agacgcatag|| \verb|agacgcatgg|| \verb|ccactgaagg|| \verb|ccactgaagg|| \verb|agacgcatagg|| agacgcatagg|| agacgcatagg$ ccctcacttt atccagttac aatcttgatt gaggaagggg tccaggcttc tccaatctga 14580 acccecteca ggettteagt agecaccata teetgtetge eceteceet acagtagtea 14640 actacttttt gaggattaaa atgcgtggtg atgctgaggt tgagtggcac ggctccagtc 14700 cctccataag acgtgcccaa aagcccttct gtgcaatggt tagcactccc tctccctact 14760  $\verb|ccctcttctc| | caagatctga| | gecttggcgt| | gaggcctgtg| | ttactagata| | acggagcccc| | 14820|$ agcettteaa titgtacaaa giccecaaac cagecatget tetecettee teetgeeaat 14880 ctcacttgcg ctacaaccaa gaaaagtcaa tttaccccag aacatgaccc ttttaactaa 14940 tecetagaat cetgeattee acetaceaga gatgteacee tattgatgag tegteacage 15000 agggtctgat agagcagaat cgaggtactg ggacatcaag acatgactgg gaagaggggg 15060 tgagagtcca gaaggggtac caggattctc aggttgaatt ttatttaggg agagcccacc 15120 caccaccttg ctatttgctt tccccaagtc atcatcttcc tctccagtaa ttacgtccct 15180 teettteetg tgaataaata eecaaageaa eteaceacea ggaaegetge gaaeetttgg 15240 aggettettt agggeaggga eettetetge caaggeetta aagaccagat acetatttea 15300 ttagacttga caaatcctga gccaagagag aaacagatgc ttgggtgctt cctgccacct 15360 gccatcctgc ccaggttagg ccaggtgtcc aaatgccttt cctaactcac acctggaact 15420 tgcccagggc tgcaagetca gaagtcaggt tctatacctg cccagaggca taaaacagcg 15480 tetteteaaa aaagettete ttteettgea eeceaeeee aetteetgga attetaeeea 15540 cttcttctgt tccccatccc agatgtctgg cggtcactgt tcctggacat cccagtgatc 15600 atggagtaga tggagaacag aattttcttt cacctcattt cagttattta aggtcactca 15660 aagetetatt ttetetttee agtatttgaa aaaagaggga ggeaatgaag acagggeece 15720 ccacctccac tcaccctgc atctggtccc actgtgaggc atcctggcca cacgctgccc 15780

gcctggaaac aacaatctaa agttccccca ttctggttcc tctgaggctg ggggaggtca 15840 aggatctgag aggagaaggg gacccaggga tggatgccta tgagatcaga atttagggga 15900 aaactgcgca ccaagaaaag gccggacggg tggaattaag gatcaacaaa tacatcaaca 15960 aagtetgaet tetetaaagg teaaaageea getaagtata gaetgteage aageeactee 16020 tatatataac tgtcccggtc tcagccagct gtcggcctct ctcagtccag agctgagtaa 16080 cgtcccagcc tcccaggccc ccgagcaccg cgccagttct gagccagagc aggagcaagg 16140 cctccgactt ccacttggcc ccacgccggt ccctccggg cctacatttc tggctctccc 16200 ctccctcct cctgccgctt atgaaggtcc tcaccacct gctgctccag accccaggac 16260 cccctcctcc taggttcccc aggtccaaag agacctcaac atccagcagc tctgaaagtg 16320 caaagatete actaacagga cageetttge eettetegte caegeeetga etgtgteate 16380 tgcctccatg ggcccagatt cccgggttcc tacttctcag ccccacctcc agccatgtcc 16440 catctacttg gccatccccc agcaagcaaa ccgctcgctg ccaccttcat ccttgcagag 16500 gccattttcc ttgcccttcc tccttactgc ccccagaagg cctgctccgt cctcacccat 16560 cagtetgtea gtetetegat teteeteete tgtgaageet eeetgeetge aetetetget 16620 tgactccaag catgccagaa acttcctgcc acttaaatga gcattccctc tgcttcctgg 16680 ttcttatccc cctgctttca gggtgtgctc caggagggca gagacacatc tgcttcagcc 16740 tttattactc ccctcacccc aaactgccca gccctgggct ctggccgtgt gcaccttggc 16800 ccacgggggc tgaccetecg geteettete etgeagagag agacteeegt gageaegagg 16860 agcccaccac ctctgagatg gccgaggaga cctactcccc caagatcttc cggcccaaac 16920 acacccgcat ctccgagctg aaggctgaag cagtgaagaa ggaccgcaga aagaagctga 16980 cccagtccaa gtttgtcggg ggagccgaga acactgccca ccccggatc atctctgcac 17040 ctgagatgag acaggagtct gagcaggtgc atctcgggga ttccctcatt ccctcccagc 17100 ccagcagagg acctacagcc caccatgtgg ctcagcttag gacgtgggag tagagtttcc 17220 agagcataca cttgtcaggg ccaagggctt gtgcaagtaa gtgggaatag aggcggtgct 17280 catttgagga gagtgtgtgc cagcccagcg gccacgtacc aggtacctgg gccctgcagc 17340 tgtgtccagt ccaaggcaga gactgaatat tctcctagag catctagaaa tgggcacctc 17400 tggacattgt tactcagcag aagagaaaag ctgcagggga gggggtggac tggaacacaa 17460 aagagaaagt atgactccgt acctggccaa aggcaggctt tgtatgatcc cagcgcacgt 17520 gacaggtgac agggaggaaa gatctttggt agcagatgat tagaaccaaa ggtggtgact 17580 ttcctccaqa qaccettcaq ccccacccc ctgggccatt cgtcagcgca gctgggtggt 17640 tttcccttqq tctcqccacg cctctcaccc tcctgtccac acagggcccc tgccgcagac 17700 acatggaggc ttccctgcag gagctcaaag ccagcccacg catggtgccc cgtgctgtgt 17760 acctgcccaa ttgtgaccgc aaaggattct acaagagaaa gcaggtacgt cccctgccct 17820 gagetecagg eteagaetge tecaaaaatg geacetgeea ggaaaeteea eettgggeaa 17880 gtgcctaagg tttccaccgt taaccactta gtgtttcctg ggcctcagat acccattcat 17940 ataccacgat catgactttc cacattccct actatgctgt aatccatttc ctcattctct 18000 cctatgcggt aatccactat gctttccaca ggtcgcctta gctacatgaa ttccttgcaa 18060 aaqqtaactc tqtaacacta tcqcacaqca cqtatcattq qtqcaccqca cactcaqqaa 18120 tttaaaccat attttctctg tgaaccacct gaaatcagtt catgtccctt cacagccagg 18180 ctctcctttg ggcaatggtt cttagatttc caagggcatc ctatccctgg agggcatggc 18240 tgatggctgg gccccacccc tgcagtttct gattggtaga cctggggtgg actccggggt 18300 ggacacgtga ccctgatgct gctttaaggg caccaataat ctaaatgtaa gagccaggcc 18360 acactggggc aaatcttggc tctgccactt actagctgtg tcctgttact caccatttaa 18420

tgtctctgtg cctccagacc cttgtgtaaa atggtgaatg aggagtgagt gattggtctt 18480 tgtaaagcac ttagaacagt acctactgcc taccaaacgt tgagtggtgt ctactacatg 18540 ataacaccac aaatcatgcc tccttctgtt attattatta ccatcatcat tattattgga 18600 tcataactct cttqaqaatc cctgcagagt ttcacgttgg gggaactcaa atgggtaata 18660 tttaaaacgg gactataagc caggcacagt ggctcacgcc tgtaatccca gctactccag 18720 aggctgaggc aggaagatca cttgggctca ggagttttag accaacctgg gcaacataac 18780 gggaccccat gtctgaaaaa aaaaaaagga aagaaaggga ttgaaggagc ttgccaaggg 18840 taggetgeet aaatteaeat ttteeetggg tettteegtg aaatggggae accagaaace 18900 caagggtcgg gtctagtgcc ctcaactctc tggggatgag agtcttgcct tggggtagac 18960 aagaggcagg gcagggagga gcagagccct ggggtgcggc cgtcctcacc gcctgttgct 19020 ctactcaccc cagtgcaaac cttcccgtgg ccgcaaacgt ggcatctgct ggtgcgtgga 19080 caagtacggg atgaagctgc caggcatgga gtacgttgac ggggactttc agtgccacac 19140 cttcgacagc agcaacgttg agtgatgcgt cccccccaa cctttccctc accccctccc 19200 acceccagee cegaetecag ecagegeete cetecaceee aggaegeeae teattteate 19260 tcatttaagg gaaaaatata tatctatcta tttgaggaaa ctgaggacct cggaatctct 19320 agcaagggct caacttcgaa aatggcaaca acagagatgc aaaaagctaa aaagacaccc 19380 cccccttta aatggttttc tttttgaggc aagttggatg aacagagaag ggaagagagg 19440 gagttaggaa aaggaagaca agcaggtggg caggaaggac atgcaccgag accaggcagg 19560 ggcccaactt tcacgtccag ccctggcctg gggtcgggag aggtgggcgc tagaagatgc 19620 agcccaggat gtggcaatca atgacactat tggggtttcc caggatggat tggtcagggg 19680 gagaaaggaa aaggcaaaac actccaggac ctctcccgga tctgtctcct cctctagcca 19740 gcagtatgga cagctggacc cctgaacttc ctctcctctt acctgggcag agtgttgtct 19800 ctccccaaat ttataaaaac taaaatgcat tccattcctc tgaaagcaaa acaaattcat 19860 aattgagtga tattaaatag agaggttttc ggaagcagat ctgtgaatat gaaatacatg 19920 tgcatatttc attccccagg cagacatttt ttagaaatca atacatgccc caatattgga 19980 aagacttgtt cttccacggt gactacagta catgctgaag cgtgccgttt cagccctcat 20040 ttaattcaat ttgtaagtag cgcagcagcc tctgtggggg aggataggct gaaaaaaaa 20100 agtgggctcg tatttatcta caggactcca tatagtcata tataggcata taaatctatt 20160 ctttttcttt qttttttct ttcttccttt ctttcaaagg tttgcattaa cttttcaaag 20220 tagttcctat aggggcattg aggagcttcc tcattctggg aaaactgaga aaacccatat 20280 tetectaata caaccegtaa tageattttt geetgeeteg aggeagagtt teeegtgage 20340 aataaactca gcttttttgt ggggcacagt actggatttg acagtgattc cccacgtgtg 20400 ttcatctgca cccaccgage caggcagagg ccagccctcc gtggtgcaca cagcacgcgc 20460 ctcagtccat cccattttag tctttaaacc ctcaggaagt cacagtctcc ggacaccaca 20520 ccacatgage ccaacaggte cacgatggat ccaccagtee cacccagee tttteettte 20580 atctgaacag aatgtgcatt tttggaagcc tccctcactc tccatgctgg cagagcagga 20640 gggagactga agtaagagat ggcagaggga gatggtggca aaaaggttta gatgcaggag 20700 aacagtaaga tggatggttc cggccagagt cgatgtgggg aggaacagag ggctgaaggg 20760 agagggggct gactgttcca ttctagcttt ggcacaaagc agcagaaagg gggaaaagcc 20820 aatagaaatt teettagett eeceaceata tgtattttet aggatttgag aggaaagaga 20880 ggaaaatggg ggaatgggtt gcaaaataga aatgagctta atccaggccg cagagccagg 20940 gaaggtgagt aactttagga gggtgctaga ctttagaagc cagataggaa gaatcagtct 21000

<210> 12						
<211> 374						
<212> DNA						
<213> Homo	sapiens					
	~					
<220>						
12207						
400 40						
<400> 12						60
gttgtctctc	cccaaattta	taaaaactaa	aatgcattcc	attcctctga	aagcaaaaca	60
aattcataat	tgagtgatat	taaatagaga	ggttttcgga	agcagatctg	tgaatatgaa	120
atacatgtgc	atatttcatt	ccccaggcag	acattttta	gaaatcaata	catgccccaa	180
tattggaaag	acttgttctt	ccacqqtqac	tacagtacat	gctgaagcgt	gccgtttcag	240
3	3		-			
ccctcattta	attcaatttg	taagtaggg	aggagggtgt	ataaaaaaaa	atagggtgaa	300
ccccaccca	accedacteg	caagcagcgc	ageageeeee	9-29999499	acaggoogaa	
					2000212122	360
aaaaaaagt	gggctcgtat	ttatetaeag	gactccatat	agicalatat	aggcatataa	300
						25.4
atctaaaaaa	aaaa					374
<210> 13						
<211> 20						
<212> DNA						
<213> Arti	ficial Seque	ence				
	-					
<220>						
~220>						
.002. 7	01:					
<223> Anti	sense Oligor	nucleoride				
<400> 13						
gagcaacacc	atcttctctt					20
<210> 14						

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

RTS-0253	-26-	PATENT
<223> Antisense Oligonucleotide		
<400> 14		
taggcggcca gcagcaggag		20
<210> 15		
<211> 20		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Antisense Oligonucleotide		
<400> 15		
gcgtgcagcg gcttctcctc		20
<210> 16	,	
<211> 20		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Antisense Oligonucleotide		
<400> 16		
cagcagggcg tgcagcggct		20
<210> 17		
<211> 20		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Antisense Oligonucleotide		
<400> 17		
ttcgttgagg caaaccccgc		20

RTS-0253

<213> Artificial Sequence

<210> 18	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 18	
ctcttttcgt tgaggcaaac	20
<210> 19	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
Value interpende origination of the contract o	
<400> 19	
gtagctcttt tcgttgaggc	20
<210> 20	
<211> 20	
<212> DNA <213> Artificial Sequence	
<213> Altificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 20	
tttctgcggt ccttcttcac	20
<b>2210</b> 21	
<210> 21	
<211> 20 <212> DNA	
20102 1000	

-27-

PATENT

RTS-0253

		2	
š	:,	-	1
ş		5	200
ş	;	4	Signature.
atapta.	,	Merez.	7
Contractor		7	ķ
		Marie A	
******		ä,	
1	Š		
- Contract	:	E 24	į,
****		25	2
į		E	1
ţ		H H	
	7	H. H. H. H.	200
į		7	,

<220>	
<223> Antisense Oligonucleotide	
<400> 21	
agcttctttc tgcggtcctt	20
<210> 22	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 22	
actgggtcag cttctttctg	20
<210> 23	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 23	
aacttggact gggtcagctt	20
<210> 24	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	

<223> Antisense Oligonucleotide

lemb The state of 1,4

200

s m ja

-29-

PATENT

-30-

RTS-0253

[amb

1,1,

amis

s m h

PATENT

gctagagatt ccgaggtcct

20

<223> Antisense Oligonucleotide	
<400> 31	
gtcctcagtt tcctcaaata	20
<210> 32	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
1220 Interpolate orașenaero eres	
<400> 32	
ccgaggtcct cagtttcctc	20
<210> 33	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 33	
agattccgag gtcctcagtt	20
<210> 34	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<b>~</b> 4447	
<223> Antisense Oligonucleotide	
<400> 34	

-31-

<210> 35	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 35	
cccttgctag agattccgag	20
210. 26	
<210> 36	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
<400> 36	
cctaactcta ttcgtctttc	20
<210> 37	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Antisense Oligonucleotide	
4005 27	
<400> 37	20
ggagaggtcc tggagtgttt	∠ ∪
<210> 38	
<211> 20	
<212> DNA	

RTS-0253	-33-	PATENT
<213> Artificial Sequence		
<220>		
<223> Antisense Oligonucleotide		
<400> 38		
gatctgcttc cgaaaacctc		20
<210> 39		
<211> 20		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Antisense Oligonucleotide		
<400> 39		
ctttgcagct ctttcctagc		20
<210> 40		
<211> 20		
<212> DNA <213> Artificial Sequence		
value in the contract of the c		
<220>		
<223> Antisense Oligonucleotide		
<400> 40		
cttgcaaaaa tgtagagaga		20
<210> 41		
<211> 20		
<212> DNA		
<213> Artificial Sequence		
<220>		

<223> Antisense Oligonucleotide

-33-

PATENT

actgtagtca ccgtggaaga

RTS-0253	-34-	PATENT
<400> 41		
gctttggctg cctgccacct		20
<210> 42		
<211> 20		
<212> DNA <213> Artificial Sequence		
<220>		
<223> Antisense Oligonucleotide		
<400> 42		
ctgcaggaga aggagccgga		20
<210> 43		
<211> 20		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Antisense Oligonucleotide		
<400> 43		

20